



A.D. 1831 N^o 6061.

S P E C I F I C A T I O N

OF

WILLIAM PARKER.

PREPARING ANIMAL CHARCOAL.

LONDON:

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Preparing Animal Charcoal.

PARKER'S SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, WILLIAM PARKER, of Albany Street, Regent's Park, in the County of Middlesex, Gentleman, send greeting.

WHEREAS His most Excellent Majesty King William the Fourth, by His
5 Letters Patent, bearing date at Westminster, the Fifteenth day of January
in the first year of His reign, did, for Himself, His heirs and successors,
grant unto me, the said William Parker, His especial licence that I, the said
William Parker, my exors, admors, and assigns, or such others as I, the said
William Parker, my exors, admors, or assigns, should at any time agree with,
10 and no others, from time to time and at all times during the term of years
therein expressed, should and lawfully might make, use, exercise, and vend,
within England, Wales, and Berwick-upon-Tweed, and also within all His
Majesty's Colonies and Plantations abroad, my Invention of "CERTAIN IMPROVE-
MENTS IN PREPARING ANIMAL CHARCOAL;" in which said Letters Patent there is
15 contained a proviso, obliging me, the said William Parker, by an instrument in
writing under my hand and seal, particularly to describe and ascertain the
nature of my said Invention, and in what manner the same is to be performed,
and to cause the same to be inrolled in His Majesty's High Court of Chancery
within four calendar months next and immediately after the date of the said
20 recited Letters Patent, as in and by the same, reference being thereunto had,
will more fully and at large appear.

NOW KNOW YE, that in compliance with the said proviso, I, the said
William Parker, do hereby declare that the nature of my said Invention, and

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the manner in which the same is to be performed, is described and ascertained as follows, that is to say:—

My said improvement consists in the revivification of the black or material called animal charcoal, which has been already used in the process of refining sugars, or in any of the processes to which such aforesaid material is or may be applied after its deterioration by having been already used in such process or processes, and which aforesaid substance or material so used and deteriorated has been hitherto considered as being thereby rendered unfit for further application to such process or processes (that is to say), in restoring to that substance or material its original property, as regards its application to and its efficacy in the process of refining sugars, or as aforesaid, in any of the processes to which such aforesaid material is or may be applied. I say that the improvement, which constitutes the object of my Patent, is the production of a revived or restored material called animal charcoal, which is or may be used for the purposes of sugar refining, or for any of those purposes or processes to which the substance or material called animal charcoal is or may be applied.

My improvement further consists in the production of the aforesaid substance or material as a manufacture from the aforesaid materials, or with the admixture of other substances herein-after stated, and in the process by which it is so produced, and in the arrangements by which the restoring or revivification of the deteriorated substance, as aforesaid, is effected. The arrangements by which such restoring or revivification is effected include the construction of certain vessels or crucibles which I apply and use in such my process; and also the aforesaid arrangements include the disposition of the aforesaid vessels or crucibles as respects each other, and also their disposition in the furnace or furnaces in which I carry on the said process. I further declare the following statement to contain a full description of my process:—The animal charcoal or material, after it has been used in the process of refining sugar, is found mixed with impurities arising from the operation. To remove these impurities the entire mass of the material is first washed to extract the saccharine matter, and it is then dried by exposure to the atmosphere or to a higher temperature until so much evaporation has taken place as that the material will readily divide into portions sufficiently small to pass through a sieve of two and a half holes in each inch, a little more or less. The operation of drying and sifting is also intended, and will effectually remove a great portion of the mechanical and grosser impurities, as pieces of sugar cane, wood, and similar substances; I then charge my iron crucibles (hereinafter described) with the material as aforesaid, taking care that it is closely

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packed and rammed, and until the crucible be completely filled. The crucibles being so filled or charged, I then place them in the furnace (also herein-after described), one standing over and upon the other in succession, covering the upper crucible of each set or column with a close-fitting cover, which I
5 confine tightly to its place with a cross piece or bridle, and I carefully apply a luting of loam or clay to the fitting parts of the crucibles. The cover of the upper crucibles and its centre opening is also to be well luted, and a small hole pierced in the luting of the centre opening to allow the escape of the gas evolved during the process.

10 The figure and construction of the crucibles is shewn in Figure 3, and the mode in which I arrange them upon each other and in the furnaces is shewn in Figure 1 and 2. I also use fresh bones, or any animal matter, or fatty or oily matter, or any resinous or bituminous substances in admixture with the deteriorated material aforesaid, any of which matters or substances produce
15 the herein-before stated effects; but in practice I prefer the former on account of greater economy. When the crucibles are arranged and luted, as aforesaid, I close the oven with bricks, and having carefully luted them, I make the fire in the fire-room beneath; I then maintain the fire at a sufficient heat to bring the crucibles to a bright red color. Before the crucibles attain this degree of
20 heat and color, the materials with which they are charged will evolve a considerable quantity of gas, which will escape through the lutings between them. The gas so escaping will be ignited by the heat of the furnace, and its combustion will materially assist the operation by giving heat to the upper crucibles which are furthest from the action of the fires. I continue this
25 operation of baking or burning until the flame from the tops of the crucibles is nearly extinct; I then cease all further supply of fuel, and prevent all admission of air to the furnace by closing the doors of the ash-pits. I let the furnace and the crucibles remain in this state until the crucibles are so far reduced in heat as to be of a dull red color. The operation of restoring and
30 revivifying is now completed, and I then throw the furnace open in order to cool the crucibles sufficiently to allow of their being removed, when their contents are taken out and ground, sifted, and prepared for use in the usual or most convenient way suitable to its intended use. The form and dimensions and the arrangement of the crucibles which I employ in my said manufacture,
35 and which I have already referred to in Figure 3 of my explanatory Drawing, are such as to allow the crucibles to be easily placed in the chamber of the furnace or to be removed from it, and also to afford an equal carbonization of their contents; and further, that the gas given out by each of the lower crucibles may serve as fuel for heating those above. And these ends I obtain

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by making my crucibles of cast iron, of the form and dimensions indicated in the Drawing at Figure 3. I place the aforesaid crucibles in the chamber of the furnace in such manner that the openings from the fire-rooms through the floor of the chamber allow the flame of the fire to enter the chamber and occupy all the space not filled by the crucibles, and to circulate amongst them. 5 Other forms of crucibles, and other modifications of furnaces may be employed to obtain the same objects, but this is the arrangement of furnace, and this the size and the form of the crucibles that I prefer.

I also claim the form and arrangement of the furnaces and crucibles, herein described, for the manufacture of charcoal. 10

In witness whereof, I, the said William Parker, have hereunto set my hand and seal, the Fourteenth day of May, in the year of our Lord One thousand eight hundred and thirty-one.

WILLIAM (L.S.) PARKER.

AND BE IT REMEMBERED, that on the Fourteenth day of May, in the 15 year of our Lord 1831, the aforesaid William Parker came before our said Lord the King in His Chancery, and acknowledged the Specification aforesaid, and all and every thing therein contained and specified, in form above written. And also the Specification aforesaid was stamped according to the tenor of the Statute made for that purpose. 20

Inrolled the Fourteenth day of May, in the year of our Lord One thousand eight hundred and thirty-one.

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FIGURE 2.

Horizontal Section of a Furnace showing also the arrangement & disposition of the Crucibles.

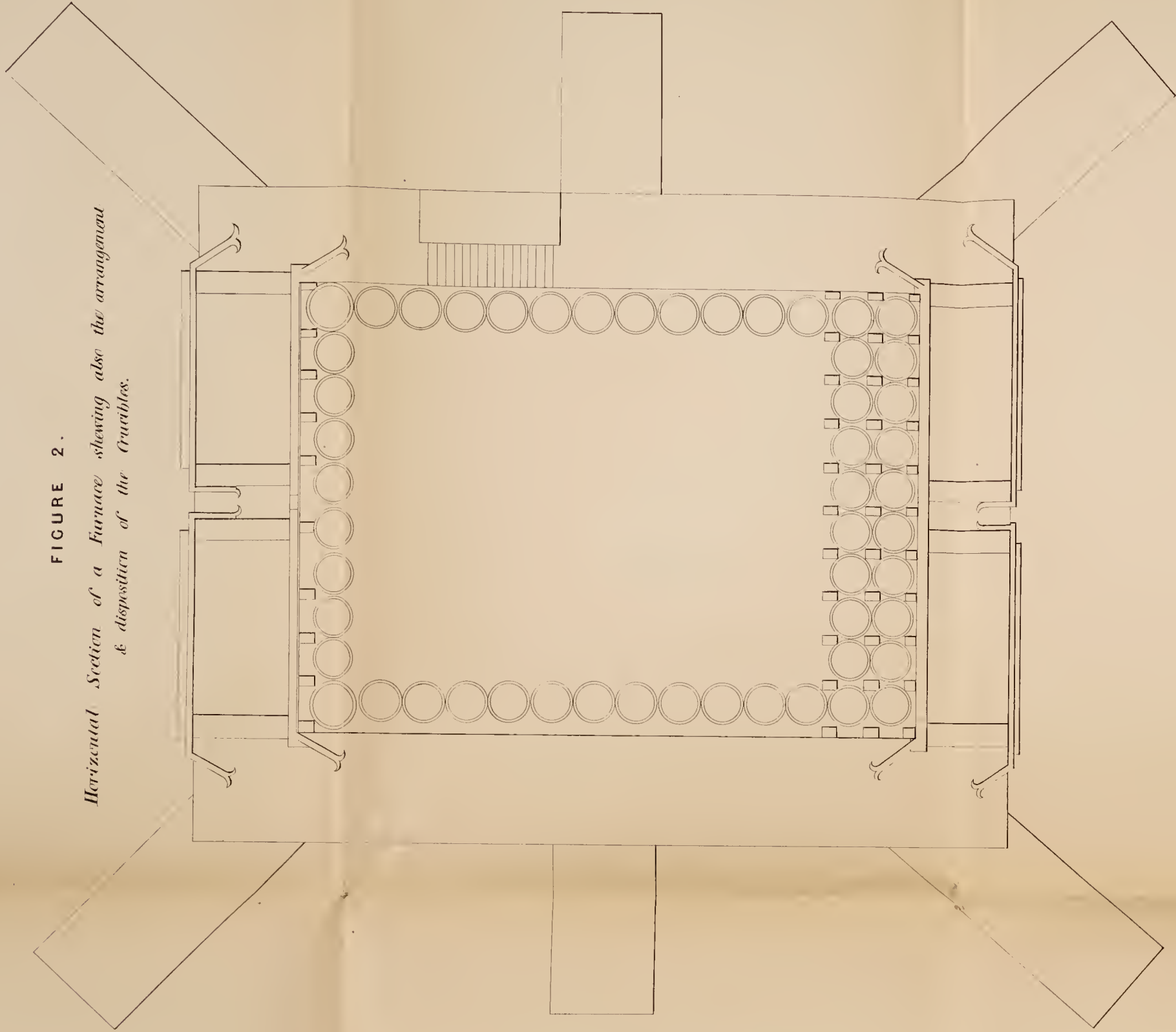
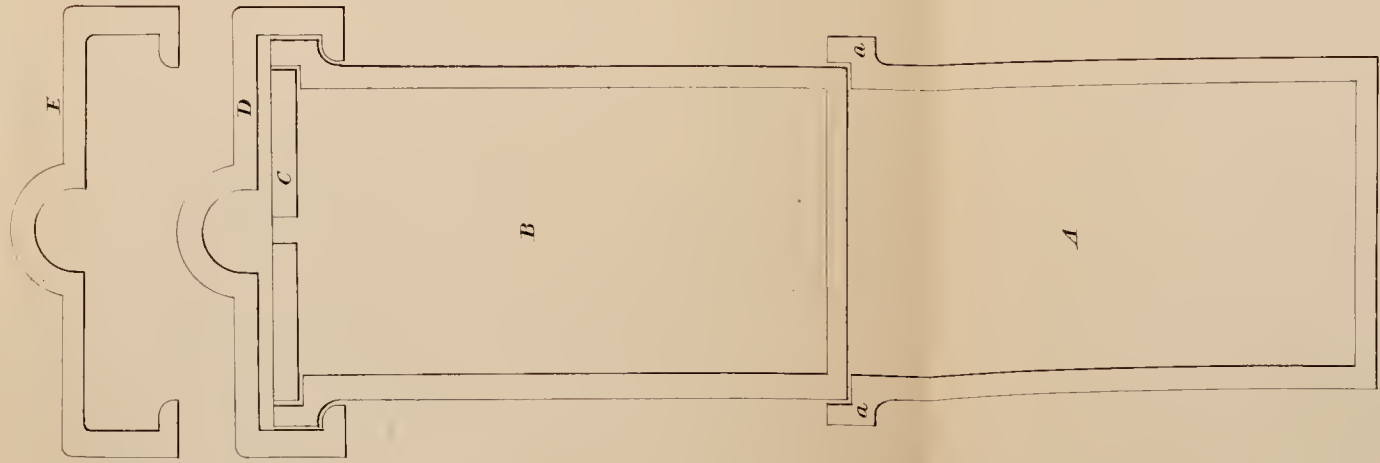


FIGURE 3.



- A. One of the Crucibles in which is held in y^e ladle a. Another Crucible is in the figure.
B. Another Crucible of the same dimensions placed in y^e ladle a. of the lower Crucible A.
C. The Cover or lid of the Upper Crucible in y^e series or column.
D. The Bridle or Cross piece which holds & confines the lid C to its place.
E. The bridle D shown detached & separate from the Crucible.

N.B. This drawing of Figures 3 is laid down to the scale of three inches to the foot.

FIGURE 1.

Vertical Section of a Furnace showing also the arrangement & disposition of the Crucibles.

